

### **ABSTRACT OF THE INVENTION**

A device and method for generating a torque, by using waste or otherwise underutilized or unutilized thermal energy. A rotor for an electrical engine is driven to rotate using such thermal energy. The rotor includes a hollow central tube with endplates rotatably mounted thereon. A plurality of magnets and elongated members extend between the endplates. A wire loop made of shape memory effect material is wound about the central tube and each of the elongated members. The rotor operates in cooperation with a stator in which a coil is provided.